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# NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

02/16/2006

DINSMORE & SHOHL LLP One Dayton Centre One South Main Street, Suite 500 Dayton, OH 45402-2023



EXAMINER

WOLFE, DEBRA M

ART UNIT PAPER NUMBER

3725

DATE MAILED: 02/16/2006

PA/40320.58/GP-3

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813 580	03/30/2004	John R. Bradley	GMC 0053	4317

TITLE OF INVENTION: ELECTROMAGNETIC FORMATION OF FUEL CELL PLATES

APPLN. TYPE	SMALL ENTITY ISSUE FEE		PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE	
nonprovisional	NO	\$1400	\$300	\$1700 .	05/16/2006	

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status above is to be removed, check box 5b on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.
- II. PART B FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.
- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Stop ISSUE FEE
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Alexandra, Virginia 22313-1450 or Fax (571)-273-2885

INSTRUCTIONS: This for appropriate. All further corr indicated unless corrected b maintenance fee notification:	elow or directed otherwise	smitting the ISSU Patent, advance or in Block 1, by (a)	E FEE and PU lers and notific specifying a	JBLICATION FEE (if requation of maintenance fees new correspondence address	uired). Blocks 1 through 5 s will be mailed to the current s; and/or (b) indicating a sep	should be completed where correspondence address as arate "FEE ADDRESS" for
CURRENT CORRESPONDENCE	E ADDRESS (Note: Use Block 1 for	any change of address)		Fee(s) Transmittal. The papers. Each addition	f mailing can only be used for his certificate cannot be used all paper, such as an assignment te of mailing or transmission.	for any other accompanying
DINSMORE & Si One Dayton Centre One South Main Str	HOHL LLP			Ce I hereby certify that t States Postal Service	ertificate of Mailing or Trans his Fee(s) Transmittal is bein with sufficient postage for fir il Stop ISSUE FEE address PTO (571) 273-2885, on the c	g deposited with the United st class mail in an envelope
Dayton, OH 45402-	-2023					(Depositor's name)
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10/813,580 03/30/2004 FITLE OF INVENTION: ELECTROMAGNETIC FOR		MATION OF FUE	John R. Br L CELL PLAT	·	GMC 0053 PA/40320.58/GP-3	4317
APPLN, TYPE	SMALL ENTITY	ISSUE FE	E	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400		\$300	\$1700	05/16/2006
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WOLFE, D	EBRA M	3725		072-056000		
CFR 1.363).  Change of corresponde Address form PTO/SB/12  "Fee Address" indicati PTO/SB/47; Rev 03-02 o Number is required.  ASSIGNEE NAME AND PLEASE NOTE: Unless	37 CFR 3.11. Completion of	Correspondence  ation form of a Customer  E PRINTED ON T  clow, no assignee cof this form is NOT	(1) the name or agents OR (2) the name registered at 2 registered listed, no nar HE PATENT (data will appea a substitute fo	r on the patent. If an assig	a member a 2	locument has been filed for
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	AALL ENTITY status. See 3		b. Applican	t is no longer claiming SMA	ALL ENTITY status. See 37 C	FR 1.27(g)(2).
The Director of the USPTO i NOTE: The Issue Fee and Pu nterest as shown by the recon	s requested to apply the Issu iblication Fee (if required) w rds of the United States Pate				ly paid issue fee to the applications and issue fee to the application of the state	
Authorized Signature				Date		
Typed or printed name				Registration	No	
This collection of information in application. Confidentiality submitting the completed app	n is required by 37 CFR 1.3 y is governed by 35 U.S.C. plication form to the USPTO	11. The information 122 and 37 CFR 1 D. Time will vary	is required to .14. This collection	obtain or retain a benefit by ction is estimated to take 12 n the individual case. Any c	the public which is to file (an minutes to complete, includir omments on the amount of ti	d by the USPTO to process) ng gathering, preparing, and me you require to complete

this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,580	03/30/2004	John R. Bradley	GMC 0053 PA/40320 58/GP-3	4317
7	590 02/16/2006		EXAM	INER
DINSMORE & S	SHOHL LLP		WOLFE, D	EBRA M
One Dayton Centr			ART UNIT	PAPER NUMBER
One South Main S Dayton, OH 45402	•		3725 DATE MAILED: 02/16/2000	5

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 262 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 262 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)
	10/813,580	BRADLEY ET AL.
Notice of Allowability	Examiner	Art Unit
	Debra Wolfe	3725
The MAILING DATE of this communication apperatus All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHT of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this apport or other appropriate communication (GHTS). This application is subject to and MPEP 1308.	olication. It not included will be mailed in due course. THIS
2. The allowed claim(s) is/are <u>1-19</u> .		
3. Acknowledgment is made of a claim for foreign priority unall All b) Some* c) None of the:  1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority do International Bureau (PCT Rule 17.2(a)).  * Certified copies not received:  Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.  4. A SUBSTITUTE OATH OR DECLARATION must be subminformal PATENT APPLICATION (PTO-152) which give 5. CORRECTED DRAWINGS (as "replacement sheets") must (a) including changes required by the Notice of Draftspers 1) hereto or 2) to Paper No./Mail Date  [b) including changes required by the attached Examiner Paper No./Mail Date  Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in the such sheet. Replacement sheet(s) should be labeled as such in the such sheet. Replacement sheet(s) should be labeled as such in the such sheet. Replacement sheet(s) should be labeled as such in the such sheet. Replacement sheet(s) should be labeled as such in the such sheet. Replacement sheet(s) should be labeled as such in the such sheet.	e been received. e been received in Application No cuments have been received in this of this communication to file a reply MENT of this application.  ditted. Note the attached EXAMINER es reason(s) why the oath or declarate st be submitted. son's Patent Drawing Review ( PTO- c. s Amendment / Comment or in the Call 1.84(c)) should be written on the drawithe header according to 37 CFR 1.121(	complying with the requirements  'S AMENDMENT or NOTICE OF ation is deficient.  948) attached  Office action of ags in the front (not the back) of (d).
DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT	osit of BIOLOGICAL MATERIAL (FOR THE DEPOSIT OF BIOLOGIC	must be submitted. Note the AL MATERIAL.
Attachment(s)  1. ☑ Notice of References Cited (PTO-892)  2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  3. ☑ Information Disclosure Statements (PTO-1449 or PTO/SB/Paper No./Mail Date  4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	6. ☐ Interview Summary Paper No./Mail Da 08), 7. ☑ Examiner's Amend	ite

#### **EXAMINER'S AMENDMENT**

The application has been amended as follows:

In the specification delete the following from page 1 lines 3-5

## "CROSS-REFERENCE TO RELATED APPLICATIONS

This application is related to U.S. Patent Application Serial No. \_\_/\_\_\_, \_\_\_ (Docket No. OSU 0019 PA), filed concurrently herewith".

## NOTICE OF ALLOWABILITY

The following is an examiner's statement of reasons for allowance.

- 1. It is the opinion of the examiner that the art of record (considered as a whole) neither anticipates nor renders obvious "a profiled surface of said die portion, wherein said profiled surface of said die portion is configured to at least partially define said network of flow passages" in combination with the rest of the claimed limitations set forth in the independent claim.
- 2. Further searching by the examiner yielded additional prior art as follows:

Gafri et al (U.S. Patent 6,708,542 B1) discloses a method of electromagnetic forming of a metal plate using an electromagnetic actuator (forming coil assembly 84) that is opposite to a profiled die portion (mold 82) and is configured to generate a magnetic field upon activation through the discharge circuitry (88). A metal plate is placed between the electromagnetic actuator (forming coil assembly 84) and the die portion (mold (82), a current is discharged to coil (85) yielding a pulsed magnetic force which induces a very rapid movement in the plate thereby allowing the plate to deform against the die portion (mold 82) [See FIG 5A & 5B, Col. 5, lines 26-65].



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Inoue (U.S. Patent # 3,365,522) discloses a method for magnetic forming of nonconductive materials by placing a nonconductive sheet of thermoplastic material (12) onto a die (10), placing an electrically conductive material (13) between the nonconductive sheet (12) and the electromagnetic actuator (coil 14, half-wave rectifier 15, and low-frequency source 16). Upon actuation of the electromagnetic actuator (coil 14, half-wave rectifier 15, and low-frequency source 16) eddy currents generated within the electrically conductive material causes the conductive layer (13) to obtain a sufficiently high temperature thus rendering the thermoplastic sheet (12) plastically deformable when a magnetic field is employed by a pulse causing the thermoplastic sheet (12) to take the shape of the profiled die portion (die cavity 11) [See Col. 3, lines 11-19].

Kusunoki et al (U.S. Patent # 6,938,449 B2) discloses a hydraulic forming device and process for forming a metal separator for a fuel cell. A metal separator is formed by first placing a metal plate body (11) onto the support section (21b) with the hydraulic fluid (A) filled to the edge portion of the lower die (21) within the hollow section (21a) [See FIG 1, Col. 8, lines 55-67], a blank holder (23) is then lowered toward the support section (21b) of the lower die (21) clamping the metal plate (11) [See FIG 2, Col. 9, lines 7-18], the upper die (22) is then lowered towards the hollow section (21 a) of the lower die (21) thus causing the hydraulic fluid to pressurize and form the rib-like structures on the metal plate (11) [See FIG 3&4, Col. 9 line 19 – Col. 10 line 29]

3. The above cited prior art fails to disclose a combination of an electromagnetic actuator and a profiled die portion configured to partially define a network of flow passages. Therefore, it



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is concluded that claims 1, 18, and 19 of the present invention are allowable subject matter over the prior art. Claims 1-19 are allowed.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Wolfe whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Thursday 6am - 3:30pm with alternating Fridays 6am - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

SUPPRISONY PATENT EXAMINER



Application/Control Number: 10/813,580

Art Unit: 3725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Debra Wolfe Examiner Art Unit 3725

PTO/SB/08A (08-03)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known **Application Number** 10/813,580 Filing Date March 30, 2004 First Named Inventor John R. Bradley Art Unit **Examiner Name** 

(Use as many sheets as necessary) Sheet

Substitute for form 1449/PTO

Attorney Docket Number GMC 0053 PA/40320.58

			Publication Date	DOCUMENTS Name of Patentee or	Pages, Columns, Lines, Where
Examiner Initials*	Cite No.	Document Number	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant
inuas	140.	Number-Kind Code <sup>2 (2 known)</sup>			Figures Appear
DW		US- 6,227,023	05/08/2001	Daehn et al.	
DW		US- 6,128,935	10/10/2000	Daehn et al.	
MV		US- 6,085,562	07/11/2000	Daehn et al.	
DIO		US- 6,050,121	04/18/2000	Daehn et al.	
SYK		US- 6,050,120	03/21/2000	Matsushita et al.	
210		US- 6,047,582	04/11/2000	Daehn et al.	
NW		US- 5,860,306	01/19/1999	Daehn et al.	
WI		us-5,824,998	10/20/1998	Livshiz et al.	
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		FORE	GN PATENT DOCU	MENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	-
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Examiner Signature 1) bra Wolfe	Date Considered	1	(11)	106	

"EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language

Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentially is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

# Notice of References Cited Application/Control No. 10/813,580 Examiner Debra Wolfe Applicant(s)/Patent Under Reexamination BRADLEY ET AL. Page 1 of 1

#### **U.S. PATENT DOCUMENTS**

				T
	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
A	US-6,938,449	09-2005	Kusunoki et al.	72/57
В	US-6,708,542	03-2004	Gafri et al.	72/56
С	US-3,365,522	01-1968	KIYOSHI INOUE	264/450
D	US-			
E	US-			
F	US-			
G	US-			
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	B C D E F G H I J K	Country Code-Number-Kind Code  A US-6,938,449  B US-6,708,542  C US-3,365,522  D US-  E US-  F US-  G US-  H US-  I US-  J US-  K US-  L US-	Country Code-Number-Kind Code         MM-YYYY           A         US-6,938,449         09-2005           B         US-6,708,542         03-2004           C         US-3,365,522         01-1968           D         US-	Country Code-Number-Kind Code         MM-YYYY         Name           A         US-6,938,449         09-2005         Kusunoki et al.           B         US-6,708,542         03-2004         Gafri et al.           C         US-3,365,522         01-1968         KIYOSHI INOUE           D         US-         US-           F         US-         US-           G         US-         US-           I         US-         US-           J         US-         US-           L         US-         US-

#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
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# NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

